1600

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/900,425B

DATE: 08/29/2003
TIME: 15:20:28

Input Set : A:\ISIS5029 ISPH0522seq.txt
Output Set: N:\CRF4\08292003\I900425B.raw

3 <110> APPLICANT: Wu, Hongjiang
4 Crooke, Stanley T.
6 <120> TITLE OF INVENTION: Human RNAse III And Compostions And Uses Thereof
8 <130> FILE REFERENCE: ISIS5029/ISPH-0522
10 <140> CURRENT APPLICATION NUMBER: 09/900,425B
11 <141> CURRENT FILING DATE: 2001-07-06
E--> 13 <160> NUMBER OF SEQ ID NOS: 37
15 <170> SOFTWARE: PatentIn version 3.1

Does Not Comply
Corrected Diskette Needed
sep. 10, 2003

ERRORED SEQUENCES

E--> 648 <210> SEQ ID NO: 4<211> 366<212> PRT<213> Saccharomyces pombe<400> 4
E--> 650 <211> LENGTH:
E--> 650 <212> TYPE:
E--> 650 <213> ORGANISM:
E--> 650 <400> SEQUENCE:

insert had returns

650 Met Gly Arg Phe Lys Arg His His Glu Gly Asp Ser Asp Ser Ser Ser
651 1 5 10 15
654 Ser Ala Ser Asp Ser Leu Ser Arg Gly Arg Arg Ser Leu Gly His Lys
655 20 25 30
658 Arg Ser Ser His Ile Lys Asn Arg Gln Tyr Tyr Ile Leu Glu Lys Lys
659 35 40 45
662 Ile Arg Lys Leu Met Phe Ala Met Lys Ala Leu Leu Glu Glu Thr Lys
663 50 55 60
666 His Ser Thr Lys Asp Asp Val Asn Leu Val Ile Pro Gly Ser Thr Trp
667 65 70 75 80
670 Ser His Ile Glu Gly Val Tyr Glu Met Leu Lys Ser Arg His Asp Arg
671 85 90 95
674 Gln Asn Glu Pro Val Ile Glu Glu Pro Ser Ser His Pro Lys Asn Gln
675 100 105 110
678 Lys Asn Gln Glu Asn Asn Glu Pro Thr Ser Glu Glu Phe Glu Glu Gly
679 115 120 125
682 Glu Tyr Pro Pro Pro Leu Pro Pro Leu Arg Ser Glu Lys Leu Lys Glu
683 130 135 140
686 Gln Val Phe Met His Ile Ser Arg Ala Tyr Glu Ile Tyr Pro Asn Gln
687 145 150 155 160
690 Ser Asn Pro Asn Glu Leu Leu Asp Ile His Asn Glu Arg Leu Glu Phe
691 165 170 175
694 Leu Gly Asp Ser Phe Phe Asn Leu Phe Thr Thr Arg Ile Ile Phe Ser
695 180 185 190
698 Lys Phe Pro Gln Met Asp Glu Gly Ser Leu Ser Lys Leu Arg Ala Lys
699 195 200 205

RAW SEQUENCE LISTING DATE: 08/29/2003
PATENT APPLICATION: **US/09/900,425B** TIME: 15:20:28

Input Set : **A:\ISIS5029 ISPH0522seq.txt**
Output Set: **N:\CRF4\08292003\I900425B.raw**

```
Phe Val Gly Asn Glu Ser Ala Asp Lys Phe Ala Arg Leu Tyr Gly Phe
    210                 215                 220
Asp Lys Thr Leu Val Leu Ser Tyr Ser Ala Glu Lys Asp Gln Leu Arg
225                 230                 235                 240
Lys Ser Gln Lys Val Ile Ala Asp Thr Phe Glu Ala Tyr Leu Gly Ala
                245                 250                 255
Leu Ile Leu Asp Gly Gln Glu Glu Thr Ala Phe Gln Trp Val Ser Arg
            260                 265                 270
Leu Leu Gln Pro Lys Ile Ala Asn Ile Thr Val Gln Arg Pro Ile Asp
        275                 280                 285
Lys Leu Ala Lys Ser Lys Leu Phe His Lys Tyr Ser Thr Leu Gly His
    290                 295                 300
Ile Glu Tyr Arg Trp Pro Ala Cys Val Asp Gly Ala Gly Gly Ser Ala
305                 310                 315                 320
Glu Gly Tyr Val Ile Ala Cys Ile Phe Asn Gly Lys Glu Val Ala Arg
                325                 330                 335
Ala Trp Gly Ala Asn Gln Lys Asp Ala Gly Ser Arg Ala Ala Met Gln
            340                 345                 350
Ala Leu Glu Val Leu Ala Lys Asp Tyr Ser Lys Phe Ala Arg
        355                 360                 365
<210> SEQ ID NO: 5
<211> LENGTH: 471
<212> TYPE: PRT
<213> ORGANISM: Saccharomyces cerevisiae
<400> SEQUENCE: 5
Met Gly Ser Lys Val Ala Gly Lys Lys Lys Thr Gln Asn Asp Asn Lys
1                   5                   10                  15
Leu Asp Asn Glu Asn Gly Ser Gln Gln Arg Glu Asn Ile Asn Thr Lys
            20                  25                  30
Thr Leu Leu Lys Gly Asn Leu Lys Ile Ser Asn Tyr Lys Tyr Leu Glu
        35                  40                  45
Val Ile Gln Leu Glu His Ala Val Thr Lys Leu Val Glu Ser Tyr Asn
    50                  55                  60
Lys Ile Ile Glu Leu Ser Pro Asn Leu Val Ala Tyr Asn Glu Ala Val
65                  70                  75                  80
Asn Asn Gln Asp Arg Val Pro Val Gln Ile Leu Pro Ser Leu Ser Arg
                85                  90                  95
Tyr Gln Leu Lys Leu Ala Ala Glu Leu Lys Thr Leu His Asp Leu Lys
            100                 105                 110
Lys Asp Ala Ile Leu Thr Glu Ile Thr Asp Tyr Glu Asn Glu Phe Asp
        115                 120                 125
Thr Glu Gln Lys Gln Pro Ile Leu Gln Glu Ile Ser Lys Ala Asp Met
    130                 135                 140
Glu Lys Leu Glu Lys Leu Glu Gln Val Lys Arg Glu Lys Arg Glu Lys
145                 150                 155                 160
Ile Asp Val Asn Val Tyr Glu Asn Leu Asn Glu Lys Glu Asp Glu Glu
                165                 170                 175
Glu Asp Glu Gly Glu Asp Ser Tyr Asp Pro Thr Lys Ala Gly Asp Ile
            180                 185                 190
```

RAW SEQUENCE LISTING DATE: 08/29/2003
PATENT APPLICATION: **US/09/900,425B** TIME: 15:20:28

Input Set : **A:\ISIS5029 ISPH0522seq.txt**
Output Set: **N:\CRF4\08292003\I900425B.raw**

```
797 Val Lys Ala Thr Lys Trp Pro Pro Lys Leu Pro Glu Ile Gln Asp Leu
798         195                 200                 205
801 Ala Ile Arg Ala Arg Val Phe Ile His Lys Ser Thr Ile Lys Asp Lys
802     210                 215                 220
805 Val Tyr Leu Ser Gly Ser Glu Met Ile Asn Ala His Asn Glu Arg Leu
806 225                 230                 235                 240
809 Glu Phe Leu Gly Asp Ser Ile Leu Asn Ser Val Met Thr Leu Ile Ile
810                 245                 250                 255
813 Tyr Asn Lys Phe Pro Asp Tyr Ser Glu Gly Gln Leu Ser Thr Leu Arg
814             260                 265                 270
817 Met Asn Leu Val Ser Asn Glu Gln Ile Lys Gln Trp Ser Ile Met Tyr
818         275                 280                 285
821 Asn Phe His Glu Lys Leu Lys Thr Asn Phe Asp Leu Lys Asp Glu Asn
822     290                 295                 300
825 Ser Asn Phe Gln Asn Gly Lys Leu Lys Leu Tyr Ala Asp Val Phe Glu
826 305                 310                 315                 320
829 Ala Tyr Ile Gly Gly Leu Met Glu Asp Asp Pro Arg Asn Asn Leu Pro
830                 325                 330                 335
833 Lys Ile Arg Lys Trp Leu Arg Lys Leu Ala Lys Pro Val Ile Glu Glu
834             340                 345                 350
837 Ala Thr Arg Asn Gln Val Ala Leu Glu Lys Thr Asp Lys Leu Asp Met
838         355                 360                 365
841 Asn Ala Lys Arg Gln Leu Tyr Ser Leu Ile Gly Tyr Ala Ser Leu Arg
842     370                 375                 380
845 Leu His Tyr Val Thr Val Lys Lys Pro Thr Ala Val Asp Pro Asn Ser
846 385                 390                 395                 400
849 Ile Val Glu Cys Arg Val Gly Asp Gly Thr Val Leu Gly Thr Gly Val
850                 405                 410                 415
853 Gly Arg Asn Ile Lys Ile Ala Gly Ile Arg Ala Ala Glu Asn Ala Leu
854             420                 425                 430
857 Arg Asp Lys Lys Met Leu Asp Phe Tyr Ala Lys Gln Arg Ala Ala Ile
858         435                 440                 445
861 Pro Arg Ser Glu Ser Val Leu Lys Asp Pro Ser Gln Lys Asn Lys Lys
862     450                 455                 460
865 Arg Lys Phe Ser Asp Thr Ser
866 465                 470
869 <210> SEQ ID NO: 6
870 <211> LENGTH: 226
871 <212> TYPE: PRT
872 <213> ORGANISM: Escherichia coli
874 <400> SEQUENCE: 6
876 Met Asn Pro Ile Val Ile Asn Arg Leu Gln Arg Lys Leu Gly Tyr Thr
877 1               5                   10                  15
880 Phe Asn His Gln Glu Leu Leu Gln Gln Ala Leu Thr His Arg Ser Ala
881             20                  25                  30
884 Ser Ser Lys His Asn Glu Arg Leu Glu Phe Leu Gly Asp Ser Ile Leu
885         35                  40                  45
888 Ser Tyr Val Ile Ala Asn Ala Leu Tyr His Arg Phe Pro Arg Val Asp
889     50                  55                  60
```

RAW SEQUENCE LISTING DATE: 08/29/2003
PATENT APPLICATION: US/09/900,425B TIME: 15:20:28

Input Set : A:\ISIS5029 ISPH0522seq.txt
Output Set: N:\CRF4\08292003\I900425B.raw

892 Glu Gly Asp Met Ser Arg Met Arg Ala Thr Leu Val Arg Gly Asn Thr
893 65 70 75 80
896 Leu Ala Glu Leu Ala Arg Glu Phe Glu Leu Gly Glu Cys Leu Arg Leu
897 85 90 95
900 Gly Pro Gly Glu Leu Lys Ser Gly Gly Phe Arg Arg Glu Ser Ile Leu
901 100 105 110
904 Ala Asp Thr Val Glu Ala Leu Ile Gly Gly Val Phe Leu Asp Ser Asp
905 115 120 125
908 Ile Gln Thr Val Glu Lys Leu Ile Leu Asn Trp Tyr Gln Thr Arg Leu
909 130 135 140
912 Asp Glu Ile Ser Pro Gly Asp Lys Gln Lys Asp Pro Lys Thr Arg Leu
913 145 150 155 160
916 Gln Glu Tyr Leu Gln Gly Arg His Leu Pro Leu Pro Thr Tyr Leu Val
917 165 170 175
920 Val Gln Val Arg Gly Glu Ala His Asp Gln Glu Phe Thr Ile His Cys
921 180 185 190
924 Gln Val Ser Gly Leu Ser Glu Pro Val Val Gly Thr Gly Ser Ser Arg
925 195 200 205
928 Arg Lys Ala Glu Gln Ala Ala Ala Glu Gln Ala Leu Lys Lys Leu Glu
929 210 215 220
932 Leu Glu
933 225
936 <210> SEQ ID NO: 7
937 <211> LENGTH: 11
938 <212> TYPE: PRT
939 <213> ORGANISM: Homo sapiens
941 <400> SEQUENCE: 7
943 His Asn Glu Arg Leu Glu Phe Leu Gly Asp Ser
944 1 5 10
947 <210> SEQ ID NO: 8
948 <211> LENGTH: 20
949 <212> TYPE: DNA
950 <213> ORGANISM: Artificial Sequence
W--> 951 <220> FEATURE:
952 <223> OTHER INFORMATION: Synthetic
954 <400> SEQUENCE: 8
955 atccctttct tccgcatgtg 20
958 <210> SEQ ID NO: 9
959 <211> LENGTH: 20
960 <212> TYPE: DNA
961 <213> ORGANISM: Artificial Sequence
W--> 962 <220> FEATURE:
963 <223> OTHER INFORMATION: Synthetic
965 <400> SEQUENCE: 9
966 gccaaggcgt gacatgatat 20
969 <210> SEQ ID NO: 10
970 <211> LENGTH: 20
971 <212> TYPE: DNA
972 <213> ORGANISM: Artificial Sequence

RAW SEQUENCE LISTING DATE: 08/29/2003
PATENT APPLICATION: US/09/900,425B TIME: 15:20:28

Input Set : A:\ISIS5029 ISPH0522seq.txt
Output Set: N:\CRF4\08292003\I900425B.raw

W--> 973 <220> FEATURE:
974 <223> OTHER INFORMATION: Synthetic
976 <400> SEQUENCE: 10
977 cggatcatta aagagcaagc 20
980 <210> SEQ ID NO: 11
981 <211> LENGTH: 20
982 <212> TYPE: DNA
983 <213> ORGANISM: Artificial Sequence
W--> 984 <220> FEATURE:
985 <223> OTHER INFORMATION: Synthetic
987 <400> SEQUENCE: 11
988 tattcaccaa agagcttcgc 20
991 <210> SEQ ID NO: 12
992 <211> LENGTH: 20
993 <212> TYPE: DNA
994 <213> ORGANISM: Artificial Sequence
W--> 995 <220> FEATURE:
996 <223> OTHER INFORMATION: Synthetic
998 <400> SEQUENCE: 12
999 caatcgtgga aagaagcaga 20
1002 <210> SEQ ID NO: 13
1003 <211> LENGTH: 20
1004 <212> TYPE: DNA
1005 <213> ORGANISM: Artificial Sequence
W--> 1006 <220> FEATURE:
1007 <223> OTHER INFORMATION: Synthetic
1009 <400> SEQUENCE: 13
1010 gctcccattt ccgcttgctg 20
1013 <210> SEQ ID NO: 14
1014 <211> LENGTH: 20
1015 <212> TYPE: DNA
1016 <213> ORGANISM: Artificial Sequence
W--> 1017 <220> FEATURE:
1018 <223> OTHER INFORMATION: Synthetic
1020 <400> SEQUENCE: 14
1021 atgctctctt tcccacctca 20
1024 <210> SEQ ID NO: 15
1025 <211> LENGTH: 20
1026 <212> TYPE: DNA
1027 <213> ORGANISM: Artificial Sequence
W--> 1028 <220> FEATURE:
1029 <223> OTHER INFORMATION: Synthetic
1031 <400> SEQUENCE: 15
1032 aaatactcca cacttgcatg 20
1035 <210> SEQ ID NO: 16
1036 <211> LENGTH: 20
1037 <212> TYPE: DNA
1038 <213> ORGANISM: Artificial Sequence
W--> 1039 <220> FEATURE:

RAW SEQUENCE LISTING DATE: 08/29/2003
PATENT APPLICATION: US/09/900,425B TIME: 15:20:28

Input Set : A:\ISIS5029 ISPH0522seq.txt
Output Set: N:\CRF4\08292003\I900425B.raw

1040 <223> OTHER INFORMATION: Synthetic
1042 <400> SEQUENCE: 16
1043 tgcacattca ccaaagtcaa 20
1046 <210> SEQ ID NO: 17
1047 <211> LENGTH: 20
1048 <212> TYPE: DNA
1049 <213> ORGANISM: Artificial Sequence
W--> 1050 <220> FEATURE:
1051 <223> OTHER INFORMATION: Synthetic
1053 <400> SEQUENCE: 17
1054 agtctagggt cacaatctgg 20
1057 <210> SEQ ID NO: 18
1058 <211> LENGTH: 20
1059 <212> TYPE: DNA
1060 <213> ORGANISM: Artificial Sequence
W--> 1061 <220> FEATURE:
1062 <223> OTHER INFORMATION: Synthetic
1064 <400> SEQUENCE: 18
1065 ttcagttgta gtggtccgac 20
1068 <210> SEQ ID NO: 19
1069 <211> LENGTH: 40
1070 <212> TYPE: DNA
1071 <213> ORGANISM: Artificial Sequence
W--> 1072 <220> FEATURE:
1073 <223> OTHER INFORMATION: Synthetic
1075 <400> SEQUENCE: 19
1076 caaggcacgc ctctcagatc gctagagaag gcttttctca 40
1079 <210> SEQ ID NO: 20
1080 <211> LENGTH: 40
1081 <212> TYPE: DNA
1082 <213> ORGANISM: Artificial Sequence
W--> 1083 <220> FEATURE:
1084 <223> OTHER INFORMATION: Synthetic
1086 <400> SEQUENCE: 20
1087 cattaattct cgcagctagc gctgcgttct tcatcgacgc 40
1090 <210> SEQ ID NO: 21
1091 <211> LENGTH: 35
1092 <212> TYPE: DNA
1093 <213> ORGANISM: Artificial Sequence
W--> 1094 <220> FEATURE:
1095 <223> OTHER INFORMATION: Synthetic
1097 <400> SEQUENCE: 21
1098 ccaaatactg atcgacaact tattgaaact tctcc 35
1101 <210> SEQ ID NO: 22
1102 <211> LENGTH: 37
1103 <212> TYPE: DNA
1104 <213> ORGANISM: Artificial Sequence
W--> 1105 <220> FEATURE:
1106 <223> OTHER INFORMATION: Synthetic

RAW SEQUENCE LISTING DATE: 08/29/2003
PATENT APPLICATION: US/09/900,425B TIME: 15:20:28

Input Set : A:\ISIS5029 ISPH0522seq.txt
Output Set: N:\CRF4\08292003\I900425B.raw

1108 <400> SEQUENCE: 22
1109 gagtttgaag aagcaattgg agtaatttttt actcatg 37
1112 <210> SEQ ID NO: 23
1113 <211> LENGTH: 27
1114 <212> TYPE: DNA
1115 <213> ORGANISM: Artificial Sequence
W--> 1116 <220> FEATURE:
1117 <223> OTHER INFORMATION: Synthetic
1119 <400> SEQUENCE: 23
1120 tcgacttctg gcaagggcat tcacatt 27
1123 <210> SEQ ID NO: 24
1124 <211> LENGTH: 26
1125 <212> TYPE: DNA
1126 <213> ORGANISM: Artificial Sequence
W--> 1127 <220> FEATURE:
1128 <223> OTHER INFORMATION: Synthetic
1130 <400> SEQUENCE: 24
1131 cctctgtgcc agcttctgtt tgtcag 26
1134 <210> SEQ ID NO: 25
1135 <211> LENGTH: 26
1136 <212> TYPE: DNA
1137 <213> ORGANISM: Artificial Sequence
W--> 1138 <220> FEATURE:
1139 <223> OTHER INFORMATION: Synthetic
1141 <400> SEQUENCE: 25
1142 tgtcagtttg tttgactttg ggacta 26
1145 <210> SEQ ID NO: 26
1146 <211> LENGTH: 26
1147 <212> TYPE: DNA
1148 <213> ORGANISM: Artificial Sequence
W--> 1149 <220> FEATURE:
1150 <223> OTHER INFORMATION: Synthetic
1152 <400> SEQUENCE: 26
1153 tttgctagga ggtggcgaag tttcac 26
1156 <210> SEQ ID NO: 27
1157 <211> LENGTH: 30
1158 <212> TYPE: DNA
1159 <213> ORGANISM: Artificial Sequence
W--> 1160 <220> FEATURE:
1161 <223> OTHER INFORMATION: Synthetic
1163 <400> SEQUENCE: 27
1164 gcttgatggc ctcttctcca ggataaatgc 30
1167 <210> SEQ ID NO: 28
1168 <211> LENGTH: 30
1169 <212> TYPE: DNA
1170 <213> ORGANISM: Artificial Sequence
W--> 1171 <220> FEATURE:
1172 <223> OTHER INFORMATION: Synthetic
1174 <400> SEQUENCE: 28

RAW SEQUENCE LISTING DATE: 08/29/2003
PATENT APPLICATION: US/09/900,425B TIME: 15:20:28

Input Set : A:\ISIS5029 ISPH0522seq.txt
Output Set: N:\CRF4\08292003\I900425B.raw

1175 aatgctgtgc ctaattcctg tgcgtcttgc 30
1178 <210> SEQ ID NO: 29
1179 <211> LENGTH: 48
1180 <212> TYPE: DNA
1181 <213> ORGANISM: Artificial Sequence
W--> 1182 <220> FEATURE:
1183 <223> OTHER INFORMATION: Synthetic
1185 <400> SEQUENCE: 29
1186 caggtgctgt cctcatcaga ctcacactcg gattcactgg aactctct 48
1189 <210> SEQ ID NO: 30
1190 <211> LENGTH: 26
1191 <212> TYPE: DNA
1192 <213> ORGANISM: Artificial Sequence
W--> 1193 <220> FEATURE:
1194 <223> OTHER INFORMATION: Synthetic
1196 <400> SEQUENCE: 30
1197 cactgggcag gaaagaacta gggttg 26
1200 <210> SEQ ID NO: 31
1201 <211> LENGTH: 26
1202 <212> TYPE: DNA
1203 <213> ORGANISM: Artificial Sequence
W--> 1204 <220> FEATURE:
1205 <223> OTHER INFORMATION: Synthetic
1207 <400> SEQUENCE: 31
1208 tggaaactat taaaactggg aggtgg 26
1211 <210> SEQ ID NO: 32
1212 <211> LENGTH: 50
1213 <212> TYPE: DNA
1214 <213> ORGANISM: Artificial Sequence
W--> 1215 <220> FEATURE:
1216 <223> OTHER INFORMATION: Synthetic
1218 <400> SEQUENCE: 32
1219 aggcatggag ggaggggggca tcatgaaggg gaaagtgcct tgtccaggag 50
1222 <210> SEQ ID NO: 33
1223 <211> LENGTH: 40
1224 <212> TYPE: DNA
1225 <213> ORGANISM: Artificial Sequence
W--> 1226 <220> FEATURE:
1227 <223> OTHER INFORMATION: Synthetic
1229 <400> SEQUENCE: 33
1230 caaggcacgc ctctcagatc gctagagaag gcttttctca 40
1233 <210> SEQ ID NO: 34
1234 <211> LENGTH: 40
1235 <212> TYPE: DNA
1236 <213> ORGANISM: Artificial Sequence
W--> 1237 <220> FEATURE:
1238 <223> OTHER INFORMATION: Synthetic
1240 <400> SEQUENCE: 34
1241 cattaattct cgcagctagc gctgcgttct tcatcgacgc 40

RAW SEQUENCE LISTING DATE: 08/29/2003
PATENT APPLICATION: **US/09/900,425B** TIME: 15:20:28

Input Set : **A:\ISIS5029 ISPH0522seq.txt**
Output Set: **N:\CRF4\08292003\I900425B.raw**

1244 <210> SEQ ID NO: 35
1245 <211> LENGTH: 20
1246 <212> TYPE: PRT
1247 <213> ORGANISM: Homo sapiens
W--> **1248 <400> SEQUENCE: 35**
1250 Cys Arg Ser Asp Tyr Asp Arg Gly Arg Thr Pro Ser Arg His Arg Ser
1251 1 5 10 15
1254 Tyr Glu Arg Ser
1255 20
1258 <210> SEQ ID NO: 36
1259 <211> LENGTH: 20
1260 <212> TYPE: PRT
1261 <213> ORGANISM: Homo sapiens
W--> **1262 <400> SEQUENCE: 36**
1264 Cys Arg Trp Glu Arg Glu His Gln Glu Arg Glu Pro Asp Glu Thr Glu
1265 1 5 10 15
1268 Asp Ile Lys Lys
1269 20
1271 <210> SEQ ID NO: 37
1272 <211> LENGTH: 466
1273 <212> TYPE: PRT
1274 <213> ORGANISM: Homo sapiens
1276 <400> SEQUENCE: 37
1278 Asn Pro Asp His Ala Arg Asn Ser Leu Ser Asn Cys Gly Ile Arg Gln
1279 1 5 10 15
1282 Pro Lys Tyr Gly Asp Arg Lys Val His His Met His Met Arg Lys Lys
1283 20 25 30
1286 Gly Ile Asn Thr Leu Ile Asn Ile Met Ser Arg Leu Gly Gln Asp Asp
1287 35 40 45
1290 Pro Thr Pro Ser Arg Ile Asn His Asn Glu Arg Leu Glu Phe Leu Gly
1291 50 55 60
1294 Asp Ala Val Val Glu Phe Leu Thr Ser Val His Leu Tyr Tyr Leu Phe
1295 65 70 75 80
1298 Pro Ser Leu Glu Glu Gly Gly Leu Ala Thr Tyr Arg Thr Ala Ile Val
1299 85 90 95
1302 Gln Asn Gln His Leu Ala Met Leu Ala Lys Lys Leu Glu Leu Asp Pro
1303 100 105 110
1306 Phe Met Leu Tyr Ala His Gly Pro Asp Leu Cys Arg Glu Ser Asp Leu
1307 115 120 125
1310 Arg His Ala Met Ala Asn Cys Phe Glu Ala Leu Ile Gly Ala Val Tyr
1311 130 135 140
1314 Leu Glu Gly Ser Leu Glu Glu Ala Lys Gln Leu Phe Gly Arg Leu Leu
1315 145 150 155 160
1318 Phe Asn Asp Pro Asp Leu Arg Glu Val Trp Leu Asn Tyr Pro Leu His
1319 165 170 175
1322 Pro Leu Gln Leu Gln Glu Pro Asn Thr Asp Arg Gln Leu Ile Glu Thr
1323 180 185 190
1326 Ser Pro Val Leu Gln Lys Leu Thr Glu Phe Glu Glu Ala Ile Gly Val
1327 195 200 205

RAW SEQUENCE LISTING DATE: 08/29/2003
PATENT APPLICATION: US/09/900,425B TIME: 15:20:28

Input Set : A:\ISIS5029 ISPH0522seq.txt
Output Set: N:\CRF4\08292003\I900425B.raw

```
1330 Ile Phe Thr His Val Arg Leu Leu Ala Arg Ala Phe Thr Leu Arg Thr
1331     210                 215                 220
1334 Val Gly Phe Asn His Leu Thr Leu Gly His Asn Gln Arg Met Glu Phe
1335 225                 230                 235                 240
1338 Leu Gly Asp Ser Ile Met Gln Leu Val Ala Thr Glu Tyr Leu Phe Ile
1339                 245                 250                 255
1342 His Phe Pro Asp His His Glu Gly His Leu Thr Leu Leu Arg Ser Ser
1343             260                 265                 270
1346 Leu Val Asn Asn Arg Thr Gln Ala Lys Val Ala Glu Glu Leu Gly Met
1347         275                 280                 285
1350 Gln Glu Tyr Ala Ile Thr Asn Asp Lys Thr Lys Arg Pro Val Gly Leu
1351     290                 295                 300
1354 Arg Thr Lys Thr Leu Ala Asp Leu Leu Glu Ser Phe Ile Ala Ala Leu
1355 305                 310                 315                 320
1358 Tyr Thr Asp Lys Asp Leu Glu Tyr Val His Thr Phe Met Asn Val Cys
1359                 325                 330                 335
1362 Phe Phe Pro Arg Leu Lys Glu Phe Ile Leu Asn Gln Asp Trp Asn Asp
1363             340                 345                 350
1366 Pro Lys Ser Gln Leu Gln Gln Cys Cys Leu Thr Leu Arg Thr Glu Gly
1367         355                 360                 365
1370 Lys Glu Pro Asp Ile Pro Leu Tyr Lys Thr Leu Gln Thr Val Gly Pro
1371     370                 375                 380
1374 Ser His Ala Arg Thr Tyr Thr Val Ala Val Tyr Phe Lys Gly Glu Arg
1375 385                 390                 395                 400
1378 Ile Gly Cys Gly Lys Gly Pro Ser Ile Gln Gln Ala Glu Met Gly Ala
1379                 405                 410                 415
1382 Ala Met Asp Ala Leu Glu Lys Tyr Asn Phe Pro Gln Met Ala His Gln
1383             420                 425                 430
1386 Lys Arg Phe Ile Gly Arg Lys Tyr Arg Gln Glu Leu Lys Glu Met Arg
1387         435                 440                 445
1390 Trp Glu Arg Glu His Gln Glu Arg Glu Pro Asp Glu Thr Glu Asp Ile
1391     450                 455                 460
1394 Lys Lys
1395 465
1396 Page 25
```

delete

VERIFICATION SUMMARY DATE: 08/29/2003
PATENT APPLICATION: **US/09/900,425B** TIME: 15:20:29

Input Set : **A:\ISIS5029 ISPH0522seq.txt**
Output Set: **N:\CRF4\08292003\I900425B.raw**

L:648 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO: 4<211> 366<212> PRT<213> Saccharomyces pombe<400> 4
L:650 M:282 E: Numeric Field Identifier Missing, <211> is required.
L:650 M:282 E: Numeric Field Identifier Missing, <212> is required.
L:650 M:282 E: Numeric Field Identifier Missing, <213> is required.
L:650 M:200 E: Mandatory Header Field missing, <400> is required.
L:951 M:283 W: Missing Blank Line separator, <220> field identifier
L:962 M:283 W: Missing Blank Line separator, <220> field identifier
L:973 M:283 W: Missing Blank Line separator, <220> field identifier
L:984 M:283 W: Missing Blank Line separator, <220> field identifier
L:995 M:283 W: Missing Blank Line separator, <220> field identifier
L:1006 M:283 W: Missing Blank Line separator, <220> field identifier
L:1017 M:283 W: Missing Blank Line separator, <220> field identifier
L:1028 M:283 W: Missing Blank Line separator, <220> field identifier
L:1039 M:283 W: Missing Blank Line separator, <220> field identifier
L:1050 M:283 W: Missing Blank Line separator, <220> field identifier
L:1061 M:283 W: Missing Blank Line separator, <220> field identifier
L:1072 M:283 W: Missing Blank Line separator, <220> field identifier
L:1083 M:283 W: Missing Blank Line separator, <220> field identifier
L:1094 M:283 W: Missing Blank Line separator, <220> field identifier
L:1105 M:283 W: Missing Blank Line separator, <220> field identifier
L:1116 M:283 W: Missing Blank Line separator, <220> field identifier
L:1127 M:283 W: Missing Blank Line separator, <220> field identifier
L:1138 M:283 W: Missing Blank Line separator, <220> field identifier
L:1149 M:283 W: Missing Blank Line separator, <220> field identifier
L:1160 M:283 W: Missing Blank Line separator, <220> field identifier
L:1171 M:283 W: Missing Blank Line separator, <220> field identifier
L:1182 M:283 W: Missing Blank Line separator, <220> field identifier
L:1193 M:283 W: Missing Blank Line separator, <220> field identifier
L:1204 M:283 W: Missing Blank Line separator, <220> field identifier
L:1215 M:283 W: Missing Blank Line separator, <220> field identifier
L:1226 M:283 W: Missing Blank Line separator, <220> field identifier
L:1237 M:283 W: Missing Blank Line separator, <220> field identifier
L:1248 M:283 W: Missing Blank Line separator, <400> field identifier
L:1262 M:283 W: Missing Blank Line separator, <400> field identifier
L:13 M:203 E: No. of Seq. differs, <160> Number Of Sequences:Input (37) Counted (36)